

Rodger

LETTER

TO THE RIGHT HONOURABLE

SIR JAMES GRAHAM, BART.

PRINCIPAL SECRETARY OF STATE FOR THE HOME DEPARTMENT.

By JAMES SYME, Esq.

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OF EDINBURGH.



TO

SIR JAMES GRAHAM, BART.

&c. &c. &c.

SIR,

I beg with great respect to submit for consideration the following remarks upon the effect which your proposed legislative measure may be expected to have upon the Medical Institutions of Scotland, and more particularly upon the University of Edinburgh.

For the medical care of Her Majesty's subjects throughout the British dominions at home and abroad, a large number of practitioners competent to perform all the duties of their profession is required. The surgeon of a ship, of a regiment, of a colony, and of a country district, must be prepared to conduct the patients who fall under his charge through the dangers and difficulties of pregnancy and parturition, to treat the ailments of nurses and infants, of children and adults, to remedy injuries, and to perform the operations of surgery; in short, to the fullest extent of the term, to be a "General Practitioner."

In thickly peopled parts of the country, and in towns of considerable size, individual practitioners, through their talents, opportunities, or experience, may acquire the confidence of those around them, so as to be consulted by their medical brethren, while still carry-

ing on a general practice of their own. And in fields of still wider extent, such as those afforded by metropolitan cities, there may be room for declining attendance upon families, and practising exclusively as physicians, surgeons, or accoucheurs.

In order to supply these wants of the community, it is obviously desirable that the most efficient means of medical instruction should be provided, together with inducements to take advantage of them, rather than of inferior qualifications for practice ; that the public should be protected against the licensing of practitioners who have not completed a proper course of education ; and that the zeal of all those regularly introduced into the profession, should be encouraged by the prospect of attaining to its highest honours, through the successful prosecution of medical science.

The great intention of “Medical Reform” was understood to be the promotion of these objects by the removal of injurious restrictions, and especially that monstrous anomaly by which the best education in Scotland or Ireland is held inadequate to qualify for general practice in England. In the several Bills brought forward during last session of Parliament, there is accordingly provision for establishing a course of preparation which, wherever completed, will be deemed sufficient for obtaining the right of practice. But this important and long-desired boon is associated with other changes, which, it is feared, will more than counterbalance the advantage that was anticipated from legislative interference. These are, classifying the profession, and restricting the universities in their power of graduation.

It is proposed that all the members of the medical

profession should be registered as Physicians, Surgeons, and General Practitioners, according to their courses of education. Now, as I have already stated, such an arrangement as this must exist to a greater or less extent in every community. But to accomplish it by the schools or licensing bodies is not less impracticable, than to determine by similar means the grades to be reached in the law or church by students of these professions. Education is of infinite importance to the individual, but with the profession and the public, counts for nothing when compared with the successful exercise of talent ; and the general practitioner who has acquired the confidence of his district holds a position that never will be conceded to a title dependent upon the mere prolongation of studies or repetition of examinations.

In the Edinburgh Colleges of Physicians and Surgeons there are few practitioners of physic or surgery, of the latter only one, by whom attendance upon families is declined. Those distinguished men, Dr Thomson, who now spends the evening of his days in honourable retirement from active exertion, and the late Dr Abercrombie, practised for many years as Fellows of the College of Surgeons, and as family attendants, before the confidence of the profession was so strongly expressed as to call them into the position of pure physicians ; and there are at present many practitioners of eminence, who, although frequently employed in consultation, would not willingly be restricted to a field, which, unless very extensively cultivated, is productive of more honour than emolument.

It is only to the general intelligence and liberal education of medical men throughout the country, untram-

meled by exclusive privileges, and stimulated by free competition, that this rarity of physicians and surgeons can be ascribed ; and it is therefore evident that, if the meaning of these titles is to be preserved, it would be necessary, in order to afford room for the different proposed ranks, that the great body of the profession should be lowered in public estimation.

In proceeding to the principal object of this communication, which is to explain the effect that the contemplated measure would have upon the University of Edinburgh, I beg to state shortly the constitution of this medical school. The Medical Faculty comprehends thirteen Professorships, to five of which the appointment lies with the Crown, that of the other eight being confided to the Town-Council of Edinburgh. The emoluments and respectability derived from these chairs, together with the assistance which they afford to the professional pursuits connected with them, whether of a practical or scientific nature, have hitherto, on the occasion of every vacancy, brought into the field a succession of candidates, generally regarded as occupying a leading, if not the first place in their respective departments. In addition to their fees, five of the Professors have salaries from the Crown. More than L.100,000 of the public money has been spent upon completing the University buildings. Nearly the same sum has been bequeathed to the management of the Principal and Professors for promoting the prosperity of the institution. The Museums of Anatomy, Natural History, and Materia Medica are extensive and efficient. There is a Botanic Garden established at an expense of L.30,000, in the most perfect state of

management. The Royal Infirmary, which contains distinct Medical and Surgical Establishments, is resorted to by patients, not only from every part of Scotland and its islands, but also from the North of England and Ireland; and, consequently, it is believed, exhibits to the student a greater variety of disease than any other single hospital in Great Britain.

Such being the condition of the University, and the number of its medical students being actually greater than that of any other school in Great Britain or Ireland, it was expected that a measure proposed or sanctioned by Her Majesty's Government, if it did not encourage and support, would certainly not cramp and fetter the working of an establishment so complete and vigorous. It is therefore with the deepest concern and disappointment that the Medical Bill now before the public has been found to contain arrangements which, if enacted into law, will infallibly render the University of Edinburgh useless as a School of Medicine, convert its medical chairs into sinecures, and render all the funds bestowed upon it so much money thrown away. That any such effect was intended by Her Majesty's Government or their immediate advisers is not and never was for a moment suspected. But that the partial, perhaps interested, views of other parties may have been permitted to exert an adverse influence, under the specious guise of elevating the dignity of University honours, I believe there is too much reason to fear.

For the last hundred years the University of Edinburgh has been employed in the education of medical men for general practice. The diploma which it bestowed upon graduates in medicine conveyed little

real privilege, but was valued as a testimonial that its possessor had completed a regular course of study in this or some other University, under teachers not self-constituted, but appointed by public authority, and had passed examination by the members of the Edinburgh Medical Faculty. The young men of Scotland looked to graduation at Edinburgh as the step most conducive to their advancement, whatever might be their views of medical practice ; and candidates for this honour came to study here, not only from England and Ireland, but from many distant countries. The medical departments of the army and navy lists, with many of the names most respected in the East India Company's Service, in the Colonies, and in private practice at home, show how extensively our degree has been sought, and how worthily it has been bestowed. But the Medical Bill withdraws the power of qualifying for general practice from the Universities, and transfers it to the Colleges of Physicians, Surgeons, and General Practitioners.

Examining Boards selected from these bodies separately, or variously combined, are to give letters-testimonial for registration, as general practitioners, to candidates 22 years of age, after five years of medical study ; while the title of Doctor, implying graduation in a University, is not to be assumed before the age of 26, passing an examination by a College of Physicians, and becoming associated with it. It is evident that this protracted and complicated process, requiring at the least eight or nine years of professional study, would be quite inconsistent with entering the public service, or encountering the laborious duties of general practice, and must therefore be confined to the

few possessors of means and connexions sufficient to warrant the expectation of obtaining employment as physicians of the upper ranks. It is true that the Universities are to have the power of granting an inferior degree of "Licentiate in the Faculty of Medicine," at the age of 22, after four years' study. But as this title cannot be obtained without undergoing the examinations and paying the fees required for registration as a general practitioner, while it conveys no privilege in addition to those implied by that designation, there is little reason to expect that the Universities will ever be called upon to confer such an equivocal and profitless honour. Indeed, the degree of M. D. itself will cease to retain the value it has hitherto possessed, since it will no longer either imply University study or be requisite to constitute the title of physician, as the Universities are to confer degrees upon candidates who have studied in extra-academical schools recognised by the Council of Health, and as general practitioners at the age of 40, after twelve years' practice, may be registered physicians upon passing an examination by the College of Physicians of England.

It may still be said, that, although the University should cease to be a source of medical honours to the working part of the profession, it will nevertheless serve as a school of preparation for the letters-testimonial which are to issue from the Colleges. But it is hardly to be expected that students and their friends will submit to the restraint and expense of University attendance, if the qualifications which they require can be obtained on easier terms at provincial or extra-academical schools, especially when it becomes known that the licensing members of the Colleges, from not

being teachers, must prepare themselves expressly for examination, which thus becoming merely a trial of memory, will give the youthful mind, assisted by an experienced “grinder,” a decided advantage.

It may therefore be fairly anticipated, that, under the proposed system, the University of Edinburgh will cease to flourish as a Medical School, and, like Oxford or Cambridge, do little more for medical science than annually confer a few honorary degrees. And if this result should unhappily ensue, there can be little doubt that a similar fate will attend the other Universities of Scotland.

In conclusion, Sir, as a teacher of nearly twenty-five years’ standing, and consequently well acquainted with the disposition, habits, and powers of medical students, I beg to remark, that the system of repeated examinations on the same subjects, by different Boards, and especially when protracted beyond the age of 22, is greatly opposed to the acquisition of sound and useful knowledge. Medicine throughout all its departments is a science of observation. Memory alone, however retentive or diligently assisted by teaching, is unable to afford the qualifications required for practice ; and it is only by digesting the facts learned, through reflection, comparison, and personal research, that they can be appropriated with any improving effect. But when the mind is loaded with all the minutiae of elementary medical and collateral study, it is incapable of the intense and devoted attention essential for attaining any approach to excellence in practical medicine or surgery. It has accordingly always seemed to me that the character of medical men depends less upon the mere period of studentship, than upon the mode in

which they spend the years immediately succeeding it, when, all their trials being past, and examinations no longer in view, the whole strength of a young, vigorous, and disciplined intellect may be applied to preparing itself for the business of life. The Bill affords no such opportunity, and, keeping the examination by his college for the last act of a physician's course of education, in addition to all the cares of graduation, would prevent the best part of his long nine years' probation from being turned to the most profitable account.

From what has been said, I trust it will appear,

That it would not be either expedient or practicable to classify the medical profession in Scotland.

That the education of general practitioners should be the great object of National Medical Schools.

That the University of Edinburgh has hitherto been employed for this purpose.

That the proposed Bill, by restricting its powers of graduation, would seriously injure, if not altogether destroy this University as a Medical School.

If these truths, as I believe them to be, should lead to a reconsideration of the proposals for improving the state of the profession, I would respectfully suggest the following measures as easily practicable and fully sufficient to remedy the existing evils :—

1. A Public Board to superintend the various Medical Schools and Licensing Bodies.

2. A standard of Education qualifying for general practice throughout Her Majesty's dominions.

3. A Register of qualified Practitioners, stating their respective licenses and titles.

4. A Regulation requiring at least one year's study at the University from which a degree is obtained.

I deem it unnecessary to explain at length the effect of these measures, but may shortly state that they appear calculated, in the *first* place, to protect the public from unqualified practitioners, without suppressing the present licensing boards, or establishing others of untried efficiency ; *secondly*, to afford professional talent and acquirement free scope for honourable competition ; *thirdly*, to excite a generous emulation in the schools and licensing bodies, by connecting with them in the public register the names of their respective *alumni* ; and *fourthly*, to prevent Universities devoid of Medical instruction from trafficking in Degrees.

I have the honour to be,

SIR,

Your most obedient Servant,

JAMES SYME.

9 CHARLOTTE SQUARE,
October 1845.

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ON UNIVERSITY IMPROVEMENT :

An Address

DELIVERED TO

THE STUDENTS IN ARTS
OF ABERDEEN UNIVERSITY,

ON OPENING THE SESSION OF THE UNIVERSITY DEBATING
SOCIETY, 12TH NOVEMBER, 1875 ;

BY

JOHN STRUTHERS, M.D.,
PROFESSOR OF ANATOMY IN THE UNIVERSITY.

ABERDEEN :
D. WYLLIE & SON.

1875.

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ON UNIVERSITY IMPROVEMENT.

My first words must be those of thanks for the honour you have done me in asking me to deliver an address to you the students in Arts. I have had, on more than one occasion, the honour of giving the address to the Society of the students of my own Faculty, but I confess that it was with some surprise, as it was with pleasure, that I received your request. But the Arts students are no strangers to me. Your work is well known to me, and we meet so steadily in the early mornings on the way to our respective colleges, and once a-week more leisurely in another place, to say nothing of my seeing the faces of inquiring spirits in the anatomical theatre on certain evenings, that we seem to want only the formal introduction to feel like old friends. There is that to me always interesting person the "Bajan," with his unknown possible, the bloom of the country on his cheek, the awe of the place on him, filled, like young Teufelsdröckh, with "innumerable dead vocables" and believing in them, reminding us pleasantly of the words of Pandulph to the Dauphin :—

How green you are, and fresh in this old world.

There is the "Semi," breathing more freely and not now afraid to smile ; the transition "Tertian," his back to the vocables and the heathen gods, breaking into fresh fields and pastures new ; the discriminating "Magistrand," a philosopher but not sure exactly what to think, variously looking out for honours or on the wing for his profession ; and, finally, I know him, metamorphosed, as the full-blown medical, emancipated and erect, eating his fill of the forbidden fruit of science.

You will not expect me to lecture you on the importance

of diligence. Students must work if you give them tasks and examinations which they must pass, but my experience of students (and many have now, elsewhere and here, passed through my hands), is, that, if you regard them as young friends and work with them, they will, without driving or compulsion, do work of the best kind. Allow me to assure you of my deep sympathy, may I say my fraternal sympathy, with working students of all the Faculties. The old saying that labour is its own reward comes to be quite true in the higher sense, but seeing that to ordinary persons the other course has attractions, it is to me always an admirable thing to see a youth at the turning point of life, a stranger and alone in the city and the crowd, settle down to steady work. By and by it becomes an intellectual pleasure. He has his reward for it as he sits alone in those long undisturbed nights, and each day on the benches in the respect and honour of his fellows; and there are few greener spots in life than when at the end of a session, not only success but honours fall to him, and he carries them home to the parental roof; when, in the words of a distinguished alumnus of our University,

From the old University town
Looking out on the cold north sea
He carried high honours down
To his home in the hill country.

Such work and such results we all praise, but when, accompanying that labour, there is labour of another kind, when the student has to engage in teaching others, or otherwise to exert himself, to provide the means of his own higher education, to pursue arduous studies and simultaneously to earn the wherewith to do so, and comes out prizeman besides, I say that is a spectacle which cannot be witnessed without the deepest respect.

But it is not of these things that you expect me to speak. There were improvements to be effected in our Institution; part is accomplished, but more, and especially the part concerning you, still waits. That is not always pleasant or thankful work, and I apprehend it to be for these reasons that you, sympathising with progress, have asked me to address you this evening.

In old institutions like ours, two courses are open to us. In one, having got into it, our aim may be to take as much out of it as we can, and as easily as we can, to provide for our friends, have nothing to do with reforms or reformers, to say with Julius Cæsar :—

Let me have men about me that are fat,
Sleek-headed men, and such as sleep o' nights,

and at the end leave it to our successors as we found it, returning to the Master his one talent which we had hidden in the earth. Or we may take an earnest view of life, we may give ourselves to the pursuit of truth and live laborious days, we may encourage merit in whatever guise it comes, we may strive to leave things better than we found them, and thus hope to leave honourable “footprints on the sands of time,” in the part of the world in which our lot has been cast.

The Services of the Retiring Lord Rector.

Before entering on the subject of University improvement, it would be ungrateful in me not to refer to what our retiring Lord Rector has done for us ; and as he has this day concluded his term of office, the occasion is a fitting one on which to acknowledge his services. More especially to have placed the Natural Sciences of the medical curriculum in their right place, and to have obtained for the student of Medicine the option of substituting a modern language for the burden of Greek, were improvements of great importance, reforms which could have been effected only by one who is himself a high authority in science. They are, I am glad to be able to say, accomplished as far as the University is concerned, and now wait only the sanction of the Privy Council to become law. Of the trouble he has not spared in coming here again and again to discharge the duties of the office, we are also very sensible. All of us, too, have felt the pleasure and the stimulus of having him among us, nor is it likely that the influence of these visits will soon pass away. Placed in that position by a memorable exercise of the spirit of a body of thoughtful young men, he came among us with many local prepossessions to encounter, and he now leaves us with the regret of all. I am sure you will all join with me in earnestly thanking Professor Huxley for these services.

Difficulties of University Reform.

The work of improvement here does not at first seem encouraging. Our students come and go, and we remain behind to the dull sky, the grey stones, and the cold north sea; and granite institutions do not readily take on the footprints. But to educate and influence so large a number of opening minds is surely a high and happy, as it is a responsible, vocation. Our University is the machine at our hand for these objects, and it is our duty to see that the machinery is in the best working order. We may be far from the centre, stranded as it were on a far-away shore, but if we are somewhat out of the world, it is not necessary, in these days of the printing press, the railway, and the telegraph, that we and our education lag behind the age. In suggesting improvements on our Scotch University system, and in particular on the education in Arts, I am sensible of the serious nature of the enterprise. The reform of the Arts education proved too difficult for the last Universities Commission, and they left it over to the new machinery of University Courts and Councils which they, and the Universities Act of 1858, set up. We may be sure that the walls of that Jericho are not going to fall down at the first blast of the trumpet. That curriculum may be likened, not to the flowing river, but rather to the frigid glacier, moving imperceptibly between its inaccessible rocky walls, in the bed which it cut for itself in past ages. When the sun shines, the thousand rills, vanishing into the crevasses and the sounding mills, give the feeling of life and warmth; but when this short session is over, succeeded by the long recess of the shadow of the Alp, even this surface life is frozen, and there is the stillness of death. It is our hope to see this frozen river converted into a running stream, giving life and fertility as it flows onward. As our own country, at one time covered with ice, is now clothed with fertile fields and smiling gardens, it may not be too much to hope that the sunshine of enlightened reform may work a like change on its higher education.

In now proceeding to notice some of the chief topics which present themselves, the one which has the first claim is that of

Open Teaching.

Amid the much discussion about new professorships, new degrees, new assessors, is it not being lost sight of, that what our Universities chiefly want to make them greater centres of educational and intellectual life, is to open the teaching? In getting all the trappings are we not neglecting the soul and life? Although this view is making progress in the south, we have heard little of it here since the time of the writings of the late Dr. Kilgour, whose robust common sense enabled him to see the fundamental importance of this question. For the student there is the stimulus of examination, in constant operation. But where is the stimulus for the teacher in our Scottish University system? Although the student may have to work hard, it does not follow that the teacher does. The wagoner does not draw the load, and when he has laid on a few more hundredweights, he has, sitting on his wagon, but to give now and then an extra crack of the whip. A body of hard-working students by no means implies a body of equally hard-working teachers; still less does it imply teaching of the right kind. Professors could not well be subjected to periodic examinations, nor would it accomplish the object. Turning to our exemplars the German Universities, we find this difficulty solved for us in the system of permitting the Privatdocenten. But we have not to go so far for an example. By the Ordinances of the Scottish Universities Commissioners, the student of Medicine in our Universities is allowed to attend four of the Curriculum classes under recognised private teachers instead of under the professors. Now, can any one say why this rule should not be extended to the Faculty of Arts? Even were it financially beneficial to professors, it cannot be on that ground that the Arts professor requires protection more than those who are grouped as Medical professors, when we consider the amount of work required to be done during the year, and during the day, and what has to be given up in order to do it. Is there any reason why a professor of Latin or Philosophy should have a monopoly of teaching more than a professor of Chemistry or Physiology? The distinguished Principal of the

University of Edinburgh, in his opening address to the students, three years ago, while regretting the existence of this monopoly, excused it meanwhile on financial grounds. A liberal donor had just given £20,000 to that University, and the Principal thought that rather more than £50,000 altogether would be needed before this monopoly could be removed. The remarks of the learned Principal (*Scotsman's* report, Nov. 2nd, 1872) show that he is fully aware that this reform would be a many-sided life-giving one to the University, but he seems to me to halt in seeing the financial lion in the path. When the rule was applied to the Medical Faculty, there was no such tender consideration for the so-called vested interests of the medical professors. But has the change injured them? On the contrary, it is, I believe, universally acknowledged in Edinburgh to have proved a marked benefit. It stimulates them, and as the natural consequence of improvement in the quality and activity of the teaching the numbers are increased. The cry, raised by some at the time, that the medical chairs would no longer be objects of ambition to distinguished men, soon ceased to be heard, and the truth is recognised that the protection was not to the professors as a body but to the inefficient among them; that the efficient professor requires no protection, the student being in fact only too happy to go to him. The new proposal, it is true, was not a palatable one to the professorial body of that day. Your professor of those good old times rather felt, with Falstaff, "I were better to be eaten to death with rust, than to be scoured to nothing with perpetual motion." Nor, perhaps, is the idea of open teaching, even yet a favourite one with professors who have not experienced it, for professorial mankind, like other parts of mankind, will cling to protection as long as wise and kind friends do not take it from them. The prospect is like that of the cold bath in the winter morning, but after it is over we feel and acknowledge the benefit.

When I was a student in Edinburgh, the monopoly was unbroken. We realised to the full the remark of Adam Smith, that "Monopolists very seldom make good work, and a lecture, which a certain number of students must attend, whether they profit by it or no, is certainly not very likely to

be a good one." Several of the professors were, to put it in the gentlest phrase, inefficient. One of them in particular, whom I can never forget, had when a young man inherited the chair, but not the fitness for it, of his distinguished father and grandfather. That man, who ought never to have been there, held for forty long years the professorship of the most fundamental chair in the Faculty of Medicine, the chair of anatomy, and under his blighting influence the University numbers in medicine went down to their lowest ebb. Those of us who remained, attracted by the eminent men who had their classes thinned by this man, and not by him alone, had no choice but to attend his lectures. We paid our money, which we would gladly have given him to go away, we gave our bodily presence, picked up what crumbs we could, and were disturbed by the merriment of the more vivacious members of the class. It was not that the man was absolutely stupid; he was said to be a good Latin scholar, whatever that might prove; but he was intolerably lazy. Let no one tell me that even one inefficient teacher in a school is a small matter. "He jests at scars that never felt a wound." I count the loss of years, and more, to that man's teaching and misdirection. Whatever enamoured me of that subject, it certainly was not the professor. It so happened that the teaching was opened just after this professor was at last driven to resign. Had it been opened sooner, that desirable event would have been brought about at once. Under his distinguished successor, the class ran rapidly up to three times the number, and the whole medical school of the University recovered its prosperity. Thus Edinburgh University by a long and severe experience learned the lesson that monopoly is injurious, that open teaching is beneficial.

The Germans carry it farther than the mere permission of the Privatdocent. These exist in all the Universities of Germany, but in addition, especially in North Germany, there is, besides the ordinary or chief professor, the extraordinary professor as he is called, a kind of junior professor as we might call him. He occupies a very subordinate position in regard to remuneration and in some other respects, but is in rivalry with the ordinary professor, or in the departments in which

laboratories are required, the work is apportioned between the two professors. The graduate who desires to teach applies to his University. If he passes the trial, he receives the authority from the Minister of Education, and is then free to lecture. He may take a special branch of the subject and generally does so, and arranges this with the professor, but he may if he like lecture on just the same subject as the professor, and his course will be taken instead of that of the professor, but he must not charge a lower fee than the professor does. The *privatdocenten* are not regarded by the professors as enemies, but receive encouragement as a source of strength. The German professor has nothing to fear from the *privatdocent*, though no doubt if the professor turned lazy his pupils would begin to go over. The *privatdocent* is not a grinder, but a worker in some branch of original research, and by this, and by the proof which he gives of his ability to teach, he shows his fitness for promotion to the professorial office. The professorial body is thus ever able to be recruited by young men who have proved their qualification to fill the position of professor. But promotion for him is not repose, for he in his turn is kept up to the mark by the new *privatdocent* at his door. In fact, the more we look into the system of the Germans, the more we see that they are before us in everything educational. An inefficient professor is scarcely possible under their system ; no one who wished a snug sinecure, or to lead a lazy life, would seek the position ; no one who had not proved his ability both as a University teacher and as an observer or thinker, can hope to get in.

It may be well to bear in mind that permission to graduates to teach at the University is no novelty, that it was part of the early constitution of the Universities. It is interesting to trace the gradual transition. At first the University was a "*Studium generale*," a general concourse of students and teachers, and the field of academical instruction was open to every graduate. The graduates, variously termed Doctors, Masters, or Regents, then synonymous terms and signifying Teacher, were not merely at liberty to teach in their University, but were required to do so for a couple of years after graduation. This period of the "open doctorate" was fol-

lowed by a transition period in which more permanent teachers were gradually introduced. Dispensation from compulsory lecturing was granted, first as an occasional irregularity, and then as a custom or right ; and salaried lectureships began to be founded, the salaries, however, being at first enjoyed on the condition of gratuitous teaching. Thus dispensation left the field to those who desired to teach, and the lectureships, disturbing the equality, rendered the voluntary teachers less able to hold their ground. Thus came the division of the graduates into two classes, the Regents and the non-Regents, and the term Regent came to be restricted to University teachers and long continued to be their designation. The term Professor seems not to have come into use before the 16th century, when it became customary in the German Universities to provide permanent salaried teachers. But the existence of the one Professor or Regent did not imply the restriction of the teaching to him, nor does the restriction exist now in most Universities. In the Scotch Universities, in which the professors long had the making of the laws, it has come about that the regulation intended only to secure attendance at the University, has slid into a regulation requiring attendance on the professor. The extension of the system of the *privatim docentes* to all the Faculties of the University, therefore, besides commending itself to reason, would be a return to former academic usage.

Too much must not be expected from the example of the extra-mural rivalry in the Edinburgh Medical School. It must be borne in mind that there is, and has long been, a complete medical school on the spot, irrespective of the University, teaching for other Boards. The body of lecturers there were, therefore, not created by the new permission to teach for the University degree, and as a matter of fact the number who avail themselves of the permission to attend the lecturer instead of the professor is, in most cases, small indeed.

But an advantage of the permission to go to private teachers is, that its mere existence, the mere liability of the professor to competition with a private teacher who might rise up, has the effect to some extent of rendering it unnecessary.

As the providing of class-rooms and other difficulties may

stand in the way of the private teacher rising up even when there is need for him, the stimulus would be applied more directly to the professorial teacher, if, instead of giving the student the option of attending a fourth of his classes under private teachers, a rule was passed making only three-fourths of the enumerated classes compulsory. The professor would not then feel that he was safe even in the absence of a private teacher. He would feel that the student might simply think his class not worth attending, preferring to trust to private study. Although there is much truth in the remark of Adam Smith that "when a man has learned his lesson well, it surely can be of little importance where or from whom he has learned it," I do not wish to be understood as advocating the London University theory, that examination should be the test of education irrespective of residence. The Germans repudiate the theory and yet they secure what it aims at. They recognise the fact that the best means of obtaining the higher education, its mental training as well as its knowledge, is by residence at a place where a body of teachers are devoted to giving that education and to the prosecution of research in learning and science. The Germans are so earnest about this, that they set up a number of such institutions and maintain them in part at the public expense, and they require candidates for degrees, for the professions, and for other public service, to study for three or four years at one or other of these Universities. They thus enforce residence, but they do not compel attendance on the professors. They are careful to provide the students with professorial teaching, but they recognise the fact that the likeliest way to dull the edge of that teaching, to defeat the very object in view, would be to make the professor feel that he is secure of his class irrespective of the merits of his teaching. They recognise that many things go to make up the benefits of University life—the stimulus of companionship, the high example, the race for distinction, the debate, the sharpening of mind against mind, the libraries, museums and experimental laboratories, and among and directing all these are the professors, partially endowed but for the rest dependent on their exertions. These exertions they stimulate by making the

professor feel that his class will be large or small according to his activity as a teacher and his reputation as an observer or thinker in the department which he professes.

Looking at it practically for our Universities, there are several ways in which open teaching might be enacted. The present rule in the medical faculties permitting a certain proportion of the classes to be attended under tried and recognised private teachers, might simply be extended to the other faculties. Or, more effectually, attendance might be required on only three-fourths of the classes. As to the proportion, I mention a fourth because that happens to be the present extent of the liberty in the medical faculties. It is right to mention that we owe this liberty not originally to the Universities' Commissioners, but to the Edinburgh Town Council, the then superiors of the University of that city, whose common sense enabled them to see the importance of making this reform, a dozen years before the Commission sat. The Commission found it in existence for Edinburgh and copied it into the ordinances for the other Universities. These Bodies would appear to have paid the medical professors the compliment of thinking that not more than a fourth part of them were likely to be inefficient. The Town Council, indeed, seem not to have had quite so high an opinion of the professors, for they made it a third of the whole, but the Commission by fixing the number of classes at four, with their enumeration of the curriculum, virtually reduced it to a fourth. For myself, I am quite ready to go as far as the Germans do, that is the whole length. I would be quite satisfied with a rule simply requiring the student, in making the usual sessions of residence, to matriculate and attend a couple of classes in each session, leaving the selection to himself. Under either method there should be the recognition and encouragement of young teachers on the system of the *Privatdocenten* of the German Universities.

As to the supposed financial difficulty, I maintain that it is unreal, that the monopoly is injurious to the interests of the professorial body, no less than to the other interests of the University. But even were it real to some little extent, is the wretched old cry of vested interests to be allowed to

stand in the way for ever? Is it that the University is made for professors, or professors for the University? It would not be easy to over-estimate the importance of the University period. It is the forming period of the future man. Compelled to attend an inefficient or a merely passable teacher, the student in the first place loses his money, which, though the least, is something, he loses his time, which is precious, but, beyond all, he loses his opportunity, his inspiration and his training to the exercise of his own powers, the golden opportunity of his youth before he goes out to the battle of life. Universities exist for the cultivation and diffusion of learning and science, and the teachers should be placed in the position which will most contribute to these ends. This cannot be without open teaching, and under such a system, as open as that of the German Universities, we need have no fear but that professorships will be sought, as in Germany, by the best minds of the nation, both as posts of honour and as spheres of continued activity. But even were the supposed financial difficulty an obstacle in respect of existing interests, the system might be introduced gradually. It is in the power of the University Courts to enact regulations for open teaching, at the same time exempting the present holders of Chairs from their operation if they choose. We are changing fast enough, and what with new appointments, and those of us who would not choose to retain such a privilege, the new influence would ere long be in free operation.

Patronage of Chairs.

The methods of appointing professors at present in use in our Universities cannot be regarded as satisfactory. Those who may have the impression that the professorial body itself can be entrusted with that delicate duty, may consult the writings on this question of the late distinguished Professor of Logic in Edinburgh University, republished in his "Discussions on Philosophy." It was what Hamilton called dividing the cake in the shade. The practice of the German Universities presents a remarkable contrast in this respect. In them, while the appointment finally rests with the Minister of Education, the initiative rests with the pro-

fessorial body ; but the large size of that body and the interest which a University on the German model has in getting the most distinguished man, swamps those influences which at one time made patronage by the Senatus a bye-word in Scotland. Men there do not offer themselves as candidates, supported by testimonials too often strong in proportion to the obscurity of the candidate or the obscurity of the writer. In Germany the man who has made the greatest name in that or in some other University, as extraordinary professor or as privatdocent, is invited, receives what is termed a call. He may then state the terms on which he will come, and if he finally expresses his willingness to accept the call, his name is sent up to the Minister of Education, with whom the appointment rests.

Nor are our provincial University Courts on the whole well adapted to discharge this duty. They are on the whole too local, and for the same reason that patronage was taken from the Senatus, that element in the Court would require to be eliminated when it exercises patronage. Patronage by the Crown, on the recommendation of the Government of the day, with all its serious drawbacks, has probably, in most cases at least, proved the least objectionable of the methods we as yet possess, and yet one says so with great misgiving. But it ought not to be that political or ecclesiastical influences, or quite accidental circumstances, should come into play in such matters, making the contest a kind of game in the dark. It is a degradation to a scientific man or to a scholar, to have to beg this or the other person to use political influence for him, and he has perhaps the satisfaction of finding that his chances are endangered and it may be his prospects in life ruined because Lady this or Sir Somebody that has been got to move on the other side, as if the question were one of the place or pension of a butler or a beadle. The risk is that the real merits of the case will not reach those with whom the appointment lies. Then a Secretary of State, overwhelmed with the various cares of the country, has but little time left for weighing the qualifications of candidates for a University chair, even were education his line.

A man who has done genuine work as a teacher and as

an observer or thinker, should be able to feel some kind of confidence that when a vacancy occurs he will be considered, and a man who has not yet done both should be made to feel that he need not apply. As a University body, a board of Patrons for the Scotch Universities composed of the Rectors, or instead of themselves, if they preferred, of four persons nominated by them, one by each, giving the casting vote to the Rector of the University in which the vacancy occurred, would give us a board of able and independent men in whom we could place confidence. Or if we had a Minister of Education, his special qualifications and his direct personal responsibility under the Crown, would give us confidence.

Summer Session in Arts.

The institution of a summer session in Arts is one of the most pressing questions. It is not so much that four years in Arts is too long a period to those who have other four years of professional curriculum to follow, though that is so, but that a large part of each year is thrown away. The work of the five months session is severe, probably too severe, with its short vacation of eight or ten days at Christmas, and it is followed by the long vacation, as it is well called, which lasts from the beginning of April till the last week of October. A friend on the Continent who desired to place one of his sons at an English speaking University, applied to me and I sent him the calendar of one of our Scottish Universities. He replied that he could not possibly send his son to Scotland as he saw that the classes meet for only five months, and what, he asked, was his son to do during the rest of the year? I do not here refer to the practice of the English Universities; we have but little to learn from them, though we would have no objection to a small measure of their superabundant wealth. If what is in itself reasonable is not enough to guide us, let us turn again to Germany. With us the Medical Faculty alone has a summer as well as a winter session; there all the Faculties have both. Their winter session is of five months, from middle of October to middle of March; their summer session is of four months, from middle of April to middle of August.

For vacation there is the month between the two sessions, and their long vacation is for two months. There the professors and students are at work in summer just as other teachers and pupils, and other people, are at their work, and they are probably by most persons around them reckoned fortunate in having a two months' clear holiday in autumn. The courses are arranged accordingly, and the Arts course is, I believe, understood to be concluded in three years.

The reasons given by the Scottish Universities Commission, in the Report of 1863, for not instituting a summer session of Arts, read like excuses rather than reasons. One still hears the same reasons echoed by those who have no desire to put their hand to this work. The case of the few who would be put to inconvenience by the change, has received, it must be confessed, an uncommon amount of tender consideration, while nothing is made of the waste of the time of the many of those who cannot come a fourth year, or of the fact that all could then finish in three years. A few years ago I happened to look in on one of the Arts Professors in Basel, to whom I had the pleasure of an introduction, it must have been well on in September, and he mentioned to me that he had that day finished his summer session. There had been an interval in summer during harvest time, and the students had then returned to finish their session. If a summer session can be in a country like Switzerland, surely it can be in Scotland. Two summer sessions would be a good equivalent for a winter session, and the course could thus be concluded at the end of the third winter session. It would be well, though it is not essential, that all the Universities went together in this. Of course many re-arrangements would require to be made, but where there is a will there is a way.

If the long professorial holiday is to come up among the vested interests, perhaps it might be compensated by other considerations, but for myself I cannot see why professors should need a longer holiday than two or three months, or indeed so much, or more than men in other professions, when their teaching duties leave them half, or more, of the day and evening for study and research. Just in case it be now conveniently discovered that, after all, it really is part of the duty

of a professor in this part of the world, as elsewhere, to engage in original research, not to be merely a person who is content to teach what is already known, and that this is the meaning of the long holiday, let us call to mind that the German professor is the man of all men who does original work, whether in languages, in philosophy, or in science, and that he is teaching in summer as well as in winter. One does not exactly see why a Scotch professor should need a longer holiday than a German professor, unless it be that those who do the least work need the longest holiday. Opinion is now, I believe, so ripe on the subject of a summer session in Arts, that it seems high time for our University Court to call on the Senatus to prepare a scheme.

Increase of the Teaching Power.

The deficiency in the teaching power of the Faculty of Arts cannot fail to strike those who are acquainted with other Universities. The Faculty may be doing its best, but the age has moved on and left it behind. In comparing its teaching power for a moment with that of the German Universities, I do not mean that we are ready to go so far, for we must remember that the Germans are in respect of education a long way before us, but it is well for us to see with what teaching staff they officer their Universities. It would be unfair to take for comparison with our own, such Universities as those of Berlin or Leipzig, with their 2000 to 3000 students, but we may fairly compare ourselves with what may be called their middle-sized Universities, as those of Bonn, Göttingen, Heidelberg, Würzburg, which in 1872 had respectively 634, 480, 415, 454 students, while we have over 600. These towns are from a fourth to one half the size of Aberdeen. In Bonn, in the Faculty of Arts (Faculty of Philosophy as they term it in Germany), the teaching staff consists of Ordinary Professors 24, Extraordinary Professors 12, Privatdocenten 21. The Professors of Chemistry, Geology, Botany, and Zoology, are included in this Faculty. We have 7 Professors in Arts, with assistants in four of the classes. The addition of Chemistry and Botany would raise our number to 9, as compared with the 24 of Bonn. In Göttingen the numbers

in Arts are, Ordinary Professors 31, Extraordinary Professors 17, Privatdocenten 16. In Heidelberg, Ordinary Professors in Arts 19, Extraordinary 10, Privatdocenten 20. Again, taking Würzburg as a South German University, there are, in Arts, 16 Professors, and 5 Privatdocenten.* Even in the lesser Universities of Germany, as Jena with half our number of students, there are, in the Faculty of Arts, Ordinary Professors 11, Extraordinary 14, Privatdocenten 4.

In none of the above-named Universities are the students in Arts more numerous than in our own University. The much larger number of professors in Arts in the German Universities is partly owing to the greater sub-division of subjects, partly to subjects being represented which are not represented at all in our University. In our national conceit we smile at the number, but the fact is one which may well make us pause and reflect. The Germans are a thoughtful and economical people, this large body of University teachers are busy men, and after long experience the Germans regard their University system as essential. We are as little ready to adopt suddenly the whole of their system as they are to adopt suddenly the whole of our political system. The German student has already passed through a thorough training in one of the numerous secondary schools, the National Gymnasias, and cannot be received as a regular University student without his certificate of having passed the leaving examination of that school; and here again we see how our secondary education is as far behind theirs as our University education is. But the study of their system is most instructive to us. The difficulties made so much of here may be

* I may mention that their Faculty of Medicine does not present the same striking contrast. One professorship they always have which I have as yet in vain advocated the institution of here—Pathology; and they have generally several specialties, such as Diseases of the Eye, of the Ear, Insanity, &c., taught sometimes by Professors sometimes by Privatdocenten. The medical teaching staff in Bonn consists of Ordinary Professors 7. Extraordinary 7, Privatdocenten 3. In Göttingen, Ordinary Professors 9, Extraordinary 6, Privatdocenten 5. In Heidelberg, Ordinary Professors 9, Extraordinary 7, Privatdocenten 6. In Würzburg, Professors 13, Privatdocenten 10. With us the number is 10, with assistants in four of the classes, but would be reduced to 7 were Chemistry, Botany, and Natural History removed, as in Germany, to the Faculty of Arts.

seen to have been settled for us there if we only look into it, and our true wisdom is to move on in their direction. Let me strongly advise you to obtain a knowledge of the German language as, next to your own, the most useful language you can acquire, and if possible to go across some day and see the institutions and mode of life of that great people.

Coming nearer home and comparing ourselves with other Scottish Universities, we find that they have been progressing. It does not follow that what is desirable in one University is equally desirable in another, If Glasgow needed a Chair of Engineering, it does not follow that Edinburgh did, at least not so much. Some subjects are of importance in particular localities, while others are of equal interest everywhere. Besides those which we have, Edinburgh has Chairs of Political Economy, English Language and Literature as a distinct professorship, of History, Sanskrit and Comparative Philology, Astronomy, Zoology as distinct from Geology and Mineralogy, of Engineering, of Agriculture, and of Music. Besides those which we have, Glasgow has Chairs of English Language and Literature as a distinct professorship, of Engineering, of Astronomy, and is about to have Zoology and Geology erected into distinct professorships. Edinburgh and St. Andrews were nearly having Chairs of the Theory and Practice of Education established during the past year, but the arrangements are not yet completed. No Scotch University has as yet a Chair for that important subject, nor one for Modern Languages. It is not meant that all these departments are proposed to be added to the curriculum for degrees, but that it is the duty of a University to be able to offer instruction in such subjects to those who may desire it, and to be not merely a teaching institution, but also one in which learning and science are advanced.

The More Immediate Wants of the University.

There are various purposes for which money is wanted for the University, but it is well to distinguish clearly between what is merely desirable, and what is essential for the daily duty of the University if it is not to be behind the age. It is

mainly for the increase of our teaching power that money is required, and for this purpose endowments are required for at least three new Chairs in the Faculty of Arts. (1.) The importance of having a professorship of the *Theory and Practice of Education* is acknowledged by nearly all who are concerned in the work of education. The new awakening that education has recently received in this country has made the want felt. We have acted in this country very much as if there were no science and art of education, while in reality the study and practice of the best methods of developing the mind is the most important of all sciences and arts. A professor of education besides discussing the principles and methods of education, would at the same time illustrate them at the practising school, as a professor of medicine illustrates his principles at the hospital. The voice of an able and independent man discussing among us the best methods of teaching the various branches of education according to their nature, would stir us all up, and even professors might come to discover that they might improve their methods. The influence for good on the future teachers would be great. Our Universities now see that it is their interest no less than their duty to bring teachers under their influence. In this direction our Universities have before them a great future, great in respect to increased numbers, and greater still in respect to increased usefulness, for what higher or nobler aim can a University have than to be the teacher of the teachers of the nation.

(2.) There does not appear to be reason why the students of this University should be denied the advantage of having a separate professorship of *English Language and Literature*. The Universities of Edinburgh and Glasgow have each a Government grant of £200 as endowment for such a Chair; the class is not thrust into a secondary position, but takes rank with the other classes, as it is well entitled to do. Can we justly complain of the insufficient appreciation of the importance of English language and literature in the schools of this part of Scotland, when we have not yet given the subject its just rank in the University? It was, indeed, I understand, an innovation for this subject to get into our University

at all in 1861, even as an appendage of another Chair. Let us hope that ere long our University may cease to be placed at a disadvantage in this respect.

(3.) The propriety of instituting a Chair for *Modern Languages* should not need advocacy. It has been said that a private teacher may be got to come in and teach French and German. The same might be said, and with more reason, for Latin and Greek, but we set up professorships of these subjects. Then it is said that each language should have a separate Chair. That it will be time enough to consider when it is offered, but what is wanted is not a man to teach the “beggarly elements,” that would continue to be got outside, but rather to handle the modern languages comparatively and to go into their literature. Rather throw Latin and Greek into one Chair, and take the other endowment for a Chair of Modern Languages, if there were no hope, as we trust there is, from without.

You will not expect me to put forward a plea for an increase in the number of Arts bursaries in our University. The following is the statement of the number and value of the bursaries in the different Faculties which I presented to the General Council of the University last year, in a Report, which the Council adopted, bringing the want of Medical bursaries under the notice of intending benefactors:—

	Number of Students Attending.	Number of Bursaries.	Total Annual Value of the Bursaries.
Arts, ...	352	223	£3751 6 0
Divinity, ...	42	27	639 0 0
Medicine, ...	251	1	26 0 0

In addition to this, the Scholarships and special Prizes awarded to graduates in Arts, or fourth-year students in Arts, amount to an annual sum of £753, of which £618 is confined to graduates in Arts. And benefactions are still flowing in in the old way. In the course of the present year there has been bequeathed, also for bursaries in Arts, by Dr. Taylor of Greenskars, that estate, worth about £10,000. The University owes its cordial thanks to this benefactor. We are always happy to receive money, but I may venture to hint, if there

are any other benevolent gentlemen, as I hope there are, thinking of promoting the usefulness of the University, that, instead of endeavouring to do so by pouring more water into an already well-filled vessel, and for the special benefit of a few to whom the Bursary Competition is already open, they may do so in a way to confer a benefit on the whole body of our students, by setting up one or more of the Chairs already mentioned.

When we turn to the scientific side of our University educational machinery, we find ourselves much in want of funds for extending the practical teaching, for our museums, for apparatus, for increasing the number, and in some cases the remuneration, of assistants, and for other purposes. A fund to be applied for such scientific purposes, under the administration of the University Court, would be a great help to the scientific side of our University.

There does not seem much hope of these needs being recognised by Government in this country. The attitude of Government in this country towards the higher education presents a marked contrast to that of Germany. The Germans placing a high value on the higher education, and recognising the fact that it cannot be self-supporting, bestow public funds in partially endowing a full staff of teachers, under conditions which secure their continued activity ; and they are now spending large sums of money in providing buildings and apparatus for the scientific departments. In Bonn, for instance, you see at the top of the Poppelsdorfer Allee, a large new building, the Chemical Institute, and a little way along from it another large new building, the Anatomy Institute. They were built by the Prussian Government, each at the cost of £20,000. The new Chemistry and Anatomy Institutes of Berlin, each cost about twice that sum. In Leipzig the old University buildings in the Augustus Platz had become insufficient for modern scientific teaching, and you now see, in the Waisenhaus Strasse, a good way off from the old University buildings, quite a row of scientific Institutes, Physics, Chemistry, Anatomy, Physiology, Pathology, all on the same large and liberal scale as those referred to at Bonn. All this the Germans consider to be well spent

money. It seems as if in this country we must look mainly to private benefactors for the means of extending the usefulness of our University, and it is therefore important that the wants of the University be made known as widely as possible.

Curriculum for Degrees.

After years of agitation, the question of the course of study for the Arts degree has come very much to where it began. If the claim of the Faculty of Arts to be regarded as the Faculty of general education be, as it ought to be, well founded, then it is clear that the education furnished should not be that of a past age, but such as to fit young men for the age in which they live, and that the degree or degrees given should be adapted to mark the attainment of that education. The objection which was made to the method of allowing the A.M. degree to be taken by bifurcation—giving the candidate the option of the departments in which he would offer himself—that it would be deceiving the public, might have had some force if applied to a professional degree. It was of no avail to point out that, if University precedent is wanted, the custom already exists in England, where, as in Oxford, the Arts degree may, after a preliminary very small go, be taken in one of several departments, and that department may be even in science alone.

The proposal to allow the option in regard to Greek only, was intended to be a practical one, as fixing on the subject a knowledge of which is of least importance to the majority of students, and as rendering whatever other arrangements the giving of an option might imply, more easily made. This proposal, however, caused extraordinary excitement in certain quarters. It was discovered that our ecclesiastical friends were deeply moved. Greek being an essential study, in fact a professional study, for the Church, it was said that students of that profession might be injured. To ordinary persons it seemed a sufficient reply to this, that no one was to be compelled to omit Greek, and that therefore every one who intended to study for the Church was to be as free as before to take that language. The reply to this, I confess astonished me—That is all very well, it was said, but those of the Arts

students who, having had no intention of entering the Church, had preferred to avoid Greek, would, if they felt inclined to change their minds at the end, find themselves discouraged from entering the Church by having their Greek still to get up! As the number of Divinity students in the University is about 30, adding those who are in the Free Church Theological College, we may say altogether about 50 in Aberdeen, and as the Arts students are 350 in number, we have thus the argument presented to us, that the 350 are to be compelled to take Greek because 50 of them require it for the Church, or because some of the ultimate 50 might not have made up their minds whether they would study for the Church. One child in the family being sick, all the children are to have the medicine; or, to take perhaps a more suitable illustration—Is not this Pharaoh's lean kine eating up the fat ones? We are indebted, however, to this late discussion for bringing clearly before us that the education of the great body of the Arts students is being sacrificed to the supposed interests of a comparatively small number of students of another Faculty, and this fact cannot be too plainly stated or too loudly proclaimed. My own view is that the selection of Greek for the option, though meant for the best, was not the best way. I would fix on no one subject, or department, as the "Sick Man" of the Arts curriculum, but give the option all round, leaving selection to determine the survival of the fittest.

Then came the proposal to offer, instead of an option for the A.M. degree, what was called the New Degree. The question what this new degree was to be called was so inconvenient that no answer could be elicited. At last the scheme appeared, a small Arts degree, but to be called a "Science" degree. The cleverness here was, that as the bursaries and scholarships go with the word Arts, the new degree would not have had these good things to recommend it, and being, besides, of the nature of a sham, would, of course, have failed. A University offering an Arts degree, and calling it a Science degree, was not inaptly at the time compared to a farmer sending a cow to the market and putting a ticket on it to say that it is a horse. But a question of legality

has arisen, which, it is understood, has put an end to this sham reform.

The reformers and their opponents are, therefore, again face to face with the question of dealing with the Arts curriculum and degree. Time will not permit me to discuss this question here. Among all those who have written on the subject, I know no one who has handled it with more mastery and common sense than Dr. Lyon Playfair, M.P., in his address, in 1873, on "Universities in their relation to Professional Education." The Universities of Edinburgh and St. Andrews are fortunate in having such a representative. What the higher education in this country wants is to have such men, to whichever side of politics they belong, not only in Parliament but in power. I have myself no doubt that it is right to allow the A.M. to be taken by bifurcation, that is with options; and that, in addition, there should be the smaller degree of B.A., and also a Bachelor of Science degree, and that for these too there should be options. For these a course of study extending over two winter and two summer sessions, or three winter sessions, would suffice; while an additional year, with high departmental proficiency, might be required for the M.A., and for the Doctor of Science. Intending teachers more especially would take the B.A. degree; intending students of Medicine more especially the Bachelor of Science degree; while by others one or other of these lesser degrees would be sought, according to taste or prospects in life, as marks of University education. When a science degree is instituted it should be on the footing on which science degrees are already given in other Universities, viz.—a preliminary examination in general education, followed by a scientific curriculum.

With such a system of degrees in Arts and Science, and corresponding curricula with options, and an enlarged teaching staff, the Faculties of Arts in our Scottish Universities might become in reality faculties of general education, and bring under their influence numbers who are at present tending farther and farther from them. It is a melancholy fact that over the last ten years, while the number of our students of Medicine has steadily and largely increased, the number

of our Arts students has not increased, and a farther significant fact is that a large number leave without completing the curriculum for the Arts degree. Surely these facts alone might teach us, if we did not know it otherwise, that the system is behind the age. There may be some who are quite content to go on with the present system, but it is a thing which cannot be permitted to continue that no mark of University education can be obtained, and that there can be no participation in the good things of the University, except on condition of subjection to the whole of the present curriculum for the A.M. degree.

The Position of the Natural Sciences.

In the German Universities the professorships of the Natural Sciences are grouped in the Faculty of Arts. It may seem not to be of much importance how they are grouped if we have them, but the effect of grouping such subjects as Chemistry and Botany, as we do, only in the Faculty of Medicine is to give them a professional air and to discourage the idea that they ought to form part of general education. Yet is not Chemistry, of all the natural sciences, the most generally interesting and important; and what more pleasant or more healthful study can there be than Botany, pursued during the summer? To group all the physical sciences together in a special Faculty of Science, as has been proposed, would not, I think, be so good an arrangement as that adopted in the German Universities, in which the Faculty of Arts includes all the branches of general education, grouped in sub-sections, and then come the three professional Faculties. Were the natural sciences transferred from the Medical Faculty to the Faculty of Arts, the student of Medicine would not the less attend them, and would be, so far, a student in Arts. He is so at present indeed, though not in name, for the various physical sciences which he studies so fully, following on his preliminary examination in languages and mathematics, form not the least part of what is entitled to be called a liberal education. One still occasionally hears the remark that the natural sciences are of little educational value, that they may be got up by cramming, and it is not a little

singular that this remark should come from those who are themselves engaged in cramming. When I hear the remark it is to me a sure sign that the speaker has had no real scientific culture, that the science he has got has been, not natural, but unnatural science. All the physical sciences, Physics, Chemistry, Geology, Botany, Zoology, Anatomy and Physiology, when taught in the right way, are excellent trainers of the reflecting faculties, not merely employers of the memory. They train the observing powers, and the generalisations of science have a remarkable effect in enlarging and liberalising the mind. I mean when they are studied not merely through books, or mere lectures, but by observation and experiment. It is then only that, coming face to face with nature, you realise what a science is, that you become attached to it and take delight in it.

The Scotch Universities are fortunate in having a fair number of scientific chairs. Although aware of the fact in a very general way, I confess that I was not prepared for the statement of a Cambridge professor, in giving evidence, only five years ago, before the Royal Commission on Scientific Instruction, that, in Cambridge, with all its boasted Mathematics, they had, at that time, no philosophical apparatus. "There is none at all," are his words. It must be a long time since the Scotch Universities were so deficient as that, though in past times their natural science was too much that of the lecture-room manuscript, the proverbial "cauld kail," making its annual re-appearance. Our Universities have had of late years to make considerable changes in order to adapt themselves to the practical and experimental methods of teaching the physical sciences, by the extension of their Museums and Laboratories and by practical teaching in them, and in none perhaps were these changes more required, and in none have they been more strikingly carried out, than in our own. These various practical rooms are mostly recent, and these instructive specimens which you see standing round you everywhere, and which the junior student may take to have been there from the beginning as part of the institution, are the fruit of but the last few years, the most stately of them all, indeed, was the work of this autumn's holiday. To pursue

this subject farther would, I fear, lead me to seem egotistical, but these have been important changes for our University, and have occupied too much labour both of head and hands to be allowed to be spoken of lightly; and one who has devoted much of his life to practising and advocating this method of teaching, and to museum work, among many discouragements, may, I hope, be reckoned justified in pointing out its importance and in referring with satisfaction to the progress which has been made.

Tenure of Bursaries.

The question of the conditions under which bursaries should be obtained and held is one which assumes a very special importance in our University. The conditions at present in force appear to me to require revisal, and I shall indicate in a few words the principles which I think should guide us in the reconstruction of these conditions.

The object of the benevolent persons by whom these endowments were given, was to assist young men in obtaining an education which would enable them to make their way in life, and they no doubt believed at the time that the Arts curriculum of the day was the best suited for the purpose. The question arises then, if the Arts curriculum is not now adapted to the age, whether it is right to insist on every one who obtains a bursary going through that curriculum? Is it to be commended, that a young man who by his wits has obtained a bursary, in a competition which in itself forms a good preliminary examination in the subjects which it covers, should thereafter be compelled, even although he does not wish to take the degree, to go through every class; that all should have to go through the same routine, however different the professions, or other occupations, to which they look forward? Suppose that the student desires simply to pursue his higher education for a couple of years, or for the four years if he like, in particular departments, is it reasonable that he should be forbidden to do so, to take what he wishes and leave the rest? This is not a question of a professional degree, and is apart from the question of an Arts degree with bifurcation. It is simply whether a youth who has been able

to carry off a bursary in the open and fair field of competition, is not to be allowed, or his parents or guardians for him, to select those branches of study which he or they may desire, and to take them in what order he or they may desire. One might prefer Languages, ancient and modern ; one might prefer Mathematics and Natural Philosophy ; another might prefer Logic and Philosophy ; a fourth, Natural Sciences. Except in the case where the donor has expressly tied down the Bursar to the curriculum for the degree, a Bursar is, so far as I am aware, in a legal position if he has matriculated and is attending a class in the Faculty, and how the rule has come to be imposed on all Bursars I am not aware. My own view of it would be to ask no more than that he should matriculate and be in attendance on, and doing satisfactory work in, a couple of classes in each session.

In like manner, the conditions of admission to the Bursary Competition appear to require revisal. Is it reasonable that the door of the competition should be shut in the face of every one who has not studied Greek, or that Latin should preponderate so enormously in the result ? Apart from prepossession, it does not appear why the Bursary Competition should not be arranged on the optional principle, the subjects arranged in several natural groups, the candidate selecting his group, and the groups of equal value.

Importance of Discussion.

I should not like to conclude these remarks without referring to Societies such as this as important instruments of education. Whatever trains you to the exercise of your own faculties and to rely on yourselves, is the best part of education. Your meetings here for debate will prove, I am sure, of more real value to you than any class in the University. You learn the great lesson that the way, and the only way, to arrive at truth is by free discussion, to give truth and error a fair ring and let them fight it out, and that truth is great and will prevail. You learn to have faith in a good cause and in the power of calm solid argument. You learn mental caution, to exercise what has been called "the slow consenting

Academic doubt ;” and you learn the difficult lesson of toleration of differences of opinion,

The summer calm of golden charity,

without which University education fails in its highest fruit. The power of expressing yourselves in debate is cultivated, and you see men, as well as opinions, find their level. Would that all that is spoken before you in class-rooms, and in other places, were uttered under a sense of its being liable to be immediately subjected to the test of debate. Were every class at least once a week turned into a well-conducted debating society, to discuss what had been asserted in the class, it would be greatly for the benefit of the taught and wholesome for the teacher.

University Life.

One often hears in after life College times referred to as the happiest. That depends on what is meant by happiness, for each period of life has its own kind of happiness. But in College days not only is the mind in its spring time, but all are on the same level, there is an open and equal field for merit, and a generous recognition of it among your fellows, while in after life there are chances. But your routine work as students is so heavy, with its daily tasks and its so much getting up for examinations, squeezed into five months of the twelve, that your University life, it is to be feared, is a somewhat hard and sunless one. The general drift of these remarks is towards more educational life and liberty, less of the “dumb driven cattle,” more of the development of the future man. I would that, when you meet in after years to talk of College times and sing of auld langsyne, you had among the

Dreams of that which cannot die,

something happier to recall than memories of cramming and examinations, and happier thoughts of your old teachers than to remember them as taskmasters drest in a little brief authority, or at best on a par with the tradesmen who, in return for money, supplied your daily wants ; that you could think of the vanished hand and the voice that is still, not as the hand

and the voice that drove, but as the hand that helped and the voice that inspired. That is the great thing for you as the outcome of University life, to have from it your inspiration and your method. But besides these, I should like to see more of the social and esthetic elements infused into our University life. Why, for instance, should a taste for music not be more cultivated among our students? Why not have an association or associations for this purpose among us. Besides the refining and elevating influence and the enjoyable relaxation, the student would feel better braced for his more serious work. But for this, and all such, our University system does nothing.

In order to supply that in which our University system is deficient, you will have to think and act for yourselves. And after all, the best part of a man's education is that which he gives himself. Shakespere describes three kinds of greatness. "Some are born great, some achieve greatness, and some have greatness thrust upon them." It is to the second of these groups that you will in all probability belong if greatness comes to you; for what have you, Aberdeen Students, to rely on but your brains and your own exertions?